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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/771,714
Filing Date: February 04, 2004
Appellant(s): CLEAVER ET AL.

Jaffrey A. Haeberlin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 9, 2007 appealing from the Office action mailed on August 15, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Wynne Willson	(US Patent No. 6,678,284 B1)	January 13, 2004
Sugiyama et al.	(US Patent No. 5,982,969)	November 9, 1999
Blanchet	(US Patent No. 4,811,507)	March 14, 1989

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 6,676,284 B1 (Wynne Willson).

Regarding claims 25 and 27, Wynne Willson discloses a flexible illumination device 1 (Figure 1) comprising:

- A solid rod-like member 2 including a light receiving surface – inner surface the rod-like member 2 -, and light-emitting surface – outer surface of the rod-like member 2 (Figure 1, column 6, lines 43-46; Claim 34; and column 10, lines 31-34); Note: Wynne Willson teaches the rod-like member formed of a flexible material or rigid material (Figure 1, column 6 lines 43-46; Claim 34; and column 10, lines 31-34).
- The rod-like member 2 composed of a substantially flexible material (Figure 1, column 6, lines 43-46; Claim 34; and column 10, lines 31-34).
- A flexible circuit board 4 received in the rod-like member 2 (Figure 1, column 2, lines 28-30; column 9, lines 17-24);
- A plurality of spaced point light sources 5 arranged on the flexible circuit board 4, and the point light sources 5 arranged in line extending along the light receiving surface of the rod-like member 2 (Figure 1, column 10, lines 38 and 39);
- The light incident and scattered on the light receiving surface of the rod like member 2, appearing uniform along the light emitting surface (Figure 1, column 10, lines 47-51; and claim 1);
- A collection surface 16, positioned near the point light sources 15, capable of reflecting light not emitted directly into the rod-like member 12' (Figure 9, column 13, lines 1-7); and
- The point light sources 15 being light emitting diodes (LEDs) (Figure 9, column 12, lines 60-64).

However, Wynne Willson does not specifically teach a collection surface included in the above-discussed first embodiment of the illumination device. On the other hand, Wynne Wilson discloses second embodiment of a flexible illumination device (Figure 9) including:

- A substantially rod-like member 12' – the combination of optically contacting elements 12 and 17- including a light receiving surface – inner surface the rod-like member 17-, and light-emitting surface – outer surface of the rod-like member 12' (Figure 9, column 13, lines 8-10;
- The rod-like member 12' composed of a substantially flexible material (Figure 9, claim 6); and
- A collection surface 16, positioned near the point light sources 15, capable of reflecting light not emitted directly into the rod-like member 12' (Figure 9, column 13, lines 1-7).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the illumination device of the first embodiment by providing the collection surface taught by Wynne Willson in the second embodiment for the benefits of directing light from the light source with minimum loss of the light flux.

Regarding claim 27, Wynne Willson discloses the illumination device as applied to claim 25 discussed above, the illumination device further including the plurality of point light sources 5, each including light emitting diodes (LEDs) (Figure 1, column 10, line 38;

3. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 6,676,284 B1 (Wynne Willson) in view of US Patent No.: 5,982,969 (Sugiyama et al.).

Wynne Willson discloses the illumination device comprising a light collection surface positioned on the inner surface of the rod-like member, and near the point light sources as applied to claim 25 discussed in section 2 above.

However, Wynne Willson does not specifically teach the light collection surface positioned adjacent a portion of the outer surface of the rod-like member as claimed by the applicant.

It would be have been obvious to one of ordinary skill in the art at the time of the invention to realize the optical equivalency of positioning the collection (reflective) surface on the outer surface of the rod-like member, instead of placing the reflective surface on the inner surface of the rod-like member as evident in Sugiyama et al. ('969) (Figures 3 and 7, column 6, lines 38-44; and column 8, lines 38-40).

Additionally, the above-indicated modification imparts benefit and advantages of controlling the direction of the light reflected through the rod-like member.

4. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 6,676,284 B1 (Wynne Willson) in view of US Patent No.: 4,811,507 (Blanchet).

Regarding claims 28 and 29, Wynne Willson discloses an illumination device comprising a rod-like member composed of flexible compound as applied to claim 25 discussed in section 2 above.

However, Wynne Willson does not specifically teach the flexible compound impregnated with filler deflecting light incident thereon.

On the other hand, Blenchet ('507) discloses an illumination apparatus including a light-conducting member 1 (Figure 3, column 2, line 62) formed of a light-transmitting material having micro balloons 6 (Figure 3, column 2, lines 62-65).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to further modify the device of Wynne Willson by providing the light-conducting member composed of a flexible material with impregnated micro balloons as taught by Blanchet for benefit and advantage of providing re-emission of light that enhancing the light reflection of light within the light guide element.

(10) Response to Amendment

Argument: Regarding the amended claim 25, Wynne Willson does not teach or suggest a solid rod-like member composed of a substantially flexible compound.

Response: As discussed in section 3 above, Wynne Willson discloses a flexible illumination device comprising:

The rod-like member 2 composed of a substantially flexible material (Figure 1, column 6, lines 43-46; Claim 34; and column 10, lines 31-34). Note: Wynne Willson teaches the rod-like member formed of a flexible material or rigid material.

Further, the column 10, lines 31-34 identified by the applicant discuss physical details of the rod-like member, and address with respect to the first option (embodiment), which is a rigid rod-like member option. Wynne Willson additionally teaches a second option (embodiment) employing a flexible rod-like member as discussed above.

Argument: Regarding the amended claim 25, Wynne Willson does not teach or suggest a solid rod-like member.

Response: Applicant claims " a flexible circuit board received in said rod-like member" in line 7 of the amended Claim 25. The rod-like member ,disclosed by Wynne Willson, includes a cavity receiving a light source (Figures 1, 2, 9 and 10). In similar manner, applicant presents solid rod-like member (Figures 5 and 6) including a cavity receiving a light source. Thus, Wynne Willson discloses a solid rod-like member as interpreted and claimed by the applicant. Therefore, Wynne Willson meets the limitation indicated above.

Therefore, Wynne Willson discloses flexible illumination device meeting the limitations of claims 25-29.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Hargobind S. Sawhney/

Primary Examiner, Art Unit 2885

Conferees:

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1/31/2008